

Ciba Specialty Chemicals



The Palette

Special Community Edition - Volume 2, Winter 2003/2004



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Value beyond chemistry

Dear Neighbor

We have been hard at work in Newport to support the Ciba Specialty Chemicals Coating Effects Business. There has been a major company wide initiative, called "Managing for Growth" to help us all understand the roles we play in supporting the company's global businesses and look for opportunities to contribute to Ciba's overall success. This has resulted in many new and innovative ideas that have broadened our focus here in Newport. We are taking on new initiatives to support our global businesses and to keep our operations strong, safe and secure in the United States.

In addition to innovation, this issue of *Community Palette* highlights our efforts in the areas of environment, health and safety as well as community involvement. Our SARA Title III report explains many of these initiatives. We continue to reduce the environmental impact of our operations and sustain our excellent safety record. In 2003, we celebrated 1 million work hours without a lost time accident and that objective continues to hold. It's clear that everyone here at Newport cares about safety and makes it a number one priority.

We remain committed to supporting education and environmental initiatives around the Newport area. Our employees have enjoyed volunteering their time and talents to special community projects like the Christina River Clean-up and National Chemistry Week.

A very important part of being a responsible community partner is to share with you information regarding our operations and activities at the Ciba Newport site. This publication is just one of the ways in which we provide that information. Please contact us on our 24-hour community hotline number, 302-992-5610, if you have any questions about the contents of this publication or would like to know more about our business. We look forward to reaching out to our local community in a very meaningful way in 2004.

Sincerely



Colin C. Mackay
Coating Effects Segment Head, NAFTA Region
Ciba Specialty Chemicals Corporation
Newport, Delaware

We are taking on new initiatives to support our global businesses and to keep our operations strong, safe and secure in the United States.



Newport's Fridolin Babler and Matt Bonk Win Ciba President's Award



Fridolin Babler (left) and Matt Bonk were honored at a gathering of Ciba Newport employees.

Dr. Fridolin Babler and Matt Bonk, both from our Coating Effects facility in Newport, have received the Ciba Specialty Chemicals President's Award for developing a hydrogen peroxide oxidation process that enhances Ciba's global competitiveness. The President's Award is Ciba's highest level of recognition and is designed to reward and showcase exemplary performance.

Martin Riediker, president of the Ciba NAFTA region (U.S., Canada and Mexico) singled out the technical achievement behind this effort, "Through their inventiveness and determination to develop hydrogen peroxide as a new oxidant for Quinacridone (QA) pigments, Fridolin and Matt helped Ciba reduce costs, improve yields, and strengthen our standing with our existing and

potential customers in the global marketplace. Their behavior exemplifies the spirit, initiative and drive that we encourage through the NAFTA President's Award."

By the late 1990's, as new environmental, cost, and capacity challenges arose, it had become imperative that the Newport plant replace a 40-year-old oxidation process and devise a new, more efficient scheme for QA production. This was hardly a simple task. There were competing patents and previous technological barriers to consider. Moreover, there were time constraints to tackle, as decisions had to align with the construction of the new QA manufacturing facility. Determined to solve the problem on time, Fridolin and Matt took the initiative and went to work. Quickly and efficiently, they

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persisted through hundreds of trial oxidations. This two-man team refused to rule out hydrogen peroxide as a potential oxidant, even though it had previously been considered and dismissed by other experts. Both scientists were driven as much by the environmental benefits – significant wastewater reductions – as they were by the competitive advantages that could be achieved.

This creative, risk-taking approach paid off spectacularly, resulting in products with superb yields, correct crystal phases and purities equaling or exceeding prior performance. With the plant's conversion to hydrogen peroxide, oxidation costs plunged by more than \$860,000, water consumption reductions saved \$36,000 annually, and maintenance costs on filter presses declined by \$28,000 on a yearly basis. There have also been further indirect savings in terms of environmental costs.

Most important, this monumental achievement has enabled Ciba to stay competitive in the global marketplace, assuring our customers that we are here to stay as a solid, steady supplier, an environmental innovator and problem solver.

Ciba Specialty Chemicals Opens a New Technical Center in Newport

Ciba Specialty Chemicals reaffirmed its dedication to customers in the polymer processing industries by opening a new technical center tailor made to support their product-based pigment needs. The new lab is located within the existing Ciba Coating Effects site in Newport.

"In this new lab, we can test our client's products to ensure that our pigments perform as expected," explained Roger Reinicker, Director of the Newport Technical Center. "We can also examine the properties of our pigments and tailor them to meet our client's specific requirements. In the long run, we can become an integral team member and partner at the planning stage for our customers' products."

The new service lab functions as part of a worldwide network of Ciba laboratory facilities known within the company as the Global Technical Center. As such, the lab provides services throughout the NAFTA Region (U.S., Mexico and Canada) and parts of Central and South America.

At a recent ribbon cutting for the new lab, Chris Newton, Global Head of the Plastics Business Line, Coating Effects commented, "In these days of global business it is absolutely necessary to understand the needs of our customers worldwide. In addition to the direct customer support, each lab within the Global Technical Center shares



left: Chris Newton attended the grand opening of the new lab along with Craig Sibol and Dick Huska.

above: Roger Reinicker discusses a fiber test with Joe Sarver.

"Through our regional and global contacts we can be first in technological excellence and customer support" — Roger Reinicker

and exchanges information and technology to provide the most up-to-date and innovative support around the world. For example, in Newport we will work cooperatively with our colleagues in the Brazil lab to provide support and services throughout the Americas. Newport is also our global center of excellence for nylon fiber and will support colleagues worldwide with these skills."

"Through our regional and global contacts we can be first in technological excellence and customer support," stated Roger Reinicker. "By pooling our worldwide resources, we can help our local customers better and support our global customers by transferring solutions to their sites around the world."

The new laboratory is the latest investment Ciba has made at the Newport site. A previous 8-year, \$180 million modernization program at Newport enhanced existing operations and developed two new state-of-the-art production facilities that provide customers with superior, high-performance pigment products.

"The Newport site is also a major R & D center for Ciba's pigments business," Reinicker explains, "so our new lab complements and strengthens the services we already provide here."

The pigments produced in Newport are used in plastics and fibers; in printing inks, paints and coatings. In particular, Ciba pigments are widely used throughout the automotive industry.

A Spark of Ingenuity Lowers Power Costs in Newport

At a time when natural gas is trading at six times the price it did three years ago, it's easy to see why energy conservation has become so important for industry as well as home owners.

The Ciba Newport site faced the challenge by taking progressive measures to conserve and make more efficient use of the natural gas the site required. After assessing potential opportunities, the Newport engineering team focused on how to achieve the greatest effectiveness from the site's two boilers.

One boiler should be sufficient for the site's load during winter and summer months. However, as they were only running at 80% capacity, two boilers were required during winter months and the second boiler was kept in stand-by mode during the summer months, which required significant and costly use of natural gas just to keep it warm.

The team initiated a two-phase project — one to improve the output of both boilers and the second to cost-effectively maintain adequate temperatures in the stand-by boiler.

During a two-day total shut down of the boilers, modifications were made to increase their efficiency. The main issue was insufficient air to the burner from the Forced Draught fan, not because

the fan was undersized but restrictions in the system, particularly the stack, caused the fan to operate below its optimum. Modifying the air-flow pattern at the entry point to the stack removed this restriction and brought the fan back to its optimum operating point. With this modification and other smaller changes, 100% capacity was achieved.

The second phase, to cost-effectively maintain adequate temperatures in the stand-by boiler was implemented during the same shut down window of each boiler. Rather than use natural gas to heat the stand-by boiler, steam heaters were installed providing constant water temperature control. The original procedure, heating the boiler several times a day with natural gas, had its drawbacks. When the boiler was not fired, the whole mass of the boiler would cool down. When the boiler was turned back on, a significant amount of gas was consumed just to re-heat the mass before any steam could be generated.

By reducing the amount of natural gas required, this project has already begun to realize significant cost savings. It was estimated that the potential savings could amount to \$300,000 per year, and already gas consumption has lowered since completion of the project in September.



... it's easy to see why energy conservation has become so important for industry as well as home owners.

Environment Health and Safety

What is SARA Title III?

SARA Title III, known as the Emergency Planning and Community Right-to-Know Act, is an element of the Superfund Amendments and Reauthorization Act (SARA) of 1986. It was designed to provide information to community members about the chemicals being produced and handled by industries in their communities, thereby, improving emergency preparedness.

SARA Title III guides dialogue between the community and businesses. It develops partnerships between, emergency responders, neighbors, community groups, and industry.

Ciba's Newport site is committed to working closely with its community, local officials, and emergency responders to ensure everyone understands the technical information on our SARA Title III Report. Our *Community Palette*, however, is just one example of how we interact with our community. Plant tours are offered



Shared Responsibility

On Monday evening, November 10, a mutual aid drill was held at the Ciba Newport site. Members of Ciba's on-site emergency response team participated in the drill along with emergency responders from the community, including the local police, fire companies, first aid, haz mat and others. These drills are held every year to familiarize all responders with the particulars of the Ciba site and to practice actual emergency scenarios. It gives everyone the opportunity to use the equipment that might be needed in an emergency and work through the logistics of a multi-unit response.

to school groups and local organizations and at least one public meeting is held each year in the local Town Hall. In addition, our employees devote their time to community activities like local sports teams, student education programs and have participated in the annual Christina River Cleanup event for the past eleven years. Ciba provides financial support to a number of environmental, educational and community service programs that include Delaware Futures, the United Way, the Delaware Nature Society and the Christina Conservancy.

There are four major components of SARA Title III:

Emergency Planning

Emergency Notification

Community Right-to-Know

Toxic Chemical Release Reporting

Emergency Planning

While our primary focus is to operate a safe plant, we must also have contingencies to address emergency readiness and response. The New Castle County Local Emergency Planning Committee (LEPC) has developed plans to minimize the impact of emergencies and help the community to take the appropriate protective measures in the event of a chemical-related incident.

Ciba is a member of the LEPC and is responsible to notify them of any changes to our plant that could affect our emergency

response plan. We also work with our local fire and police departments to improve response capabilities and hold at least one full-scale emergency response exercise per year. Many employees are part of our on-site fire brigade, first aid, confined space, and hazardous materials (HAZMAT) teams. We also have fully equipped emergency response vehicles, with personal protective gear, breathing apparatus and spill containment equipment that we make available to the LEPC in support of their own community response needs.

Ciba's Newport site is committed to working closely with its community, local officials, and emergency responders to ensure everyone understands the technical information on our SARA Title III Report.

Emergency Notification

Ciba is required to notify the National Response Center in the event of a spill or release of specified amounts of the chemicals listed under SARA Title III as well as other regulations.

Community Right-to-Know

Material Safety Data Sheets (MSDS) on all chemicals used and produced at the Ciba site are available to the public upon request. An MSDS contains information about the properties of a particular substance and is designed to provide both workers and emergency personnel with the proper procedures for handling or working with the material.

A 24-hour hotline (302-992-5610) is available for questions regarding our operations at the Newport site from members of the community and general public.

Environment Health and Safety

Toxic Chemical Release Reporting

Section 313 of SARA Title III requires facilities that produce or use specified amounts of over 300 chemicals report all environmental emissions to the air, land and water to the US Environmental Protection Agency (EPA) and state officials. The report covers a calendar year and must be filed by July 1 following the year just completed. The data published in this report is from 1998 - 2002.

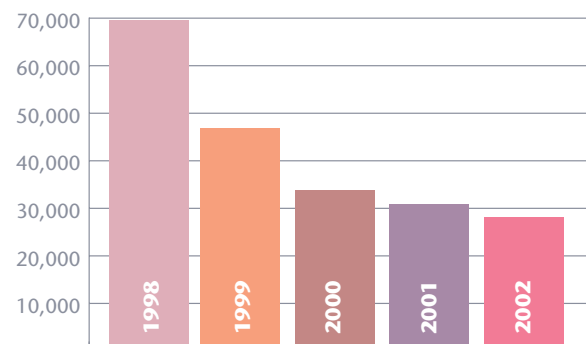
Newport Plant Emissions

The following graphs illustrate the amount of chemicals the site reported as emissions, recycled or treated off-site. The data in each of these charts illustrates that the site is working positively to reduce emissions, reduce the need to have chemicals treated off-site and to maintain a high level of recycling and energy recovery.

MATERIAL RELEASED

Releases enter the air from normal production operations through stacks, vent piping ducts, and confined air streams. We continually work to reduce our air releases, and this has resulted in a very favorable downward trend.

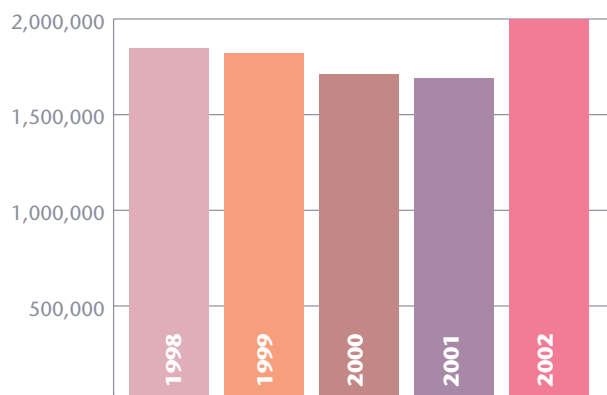
POUNDS



MATERIAL RECYCLED/ENERGY RECOVERY

The materials in this class are either recycled or transferred offsite to be burned for energy recovery purposes. Ciba continues to investigate new ways to recycle by-product material from our processes, for example, we now recycle DPP alcohols that used to be treated off site. This resulted in a positive impact on our recycling numbers and reduced the material treated.

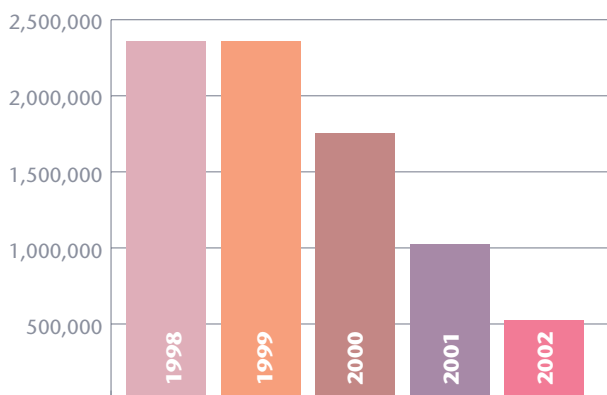
POUNDS



MATERIAL TREATED

These are discharged materials that cannot currently be recycled and are therefore treated off site. Our numbers have decreased because of upgrades we made to recover more of these materials before they leave the plant. We are continually looking at ways to optimize our recovery and recycling operations.

POUNDS



Tomorrow's Manufacturers Visit Ciba Today

On June 26, the Ciba Specialty Chemicals Newport site welcomed 25 soon-to-be high school freshmen participating in a summer program to learn about manufacturing. Called Manufacturing Awareness for Kids Everywhere or MAKE It, the program was developed by the Delaware State Chamber of Commerce and Del Tech Community College.

Students work in small groups led by faculty from Del Tech's Engineering Technology program to gain exposure to various aspects of manufacturing including computer-aided drafting, electronics, product development and hands on techniques to make a take-home product of their own.

In addition to the hands-on learning, the students take field trips to learn about manufacturing businesses in Delaware. The Newport site was one of the stops where students toured the new synthesis building, control room and maintenance shop. Site Manager Colin Mackay provided an overview

presentation of the business and various employees spoke to the group about their jobs and the education and training that is required to work at a company like Ciba.

Colin Mackay explains that Ciba's red pigment is used in the hardhats the high school students were required to wear during their visit to the Newport site.

Colin Mackay explains the layout, operations and products of the Newport site to high school students attending a summer manufacturing program.



Robert Brown (left) and Dakota Williams display their recognition awards from Junior Achievement with Colin Mackay (center).

Dakota Williams and Robert Brown Honored by Junior Achievement

Junior Achievement of Delaware gave thanks and recognition to Ciba Newport site volunteers Dakota Williams and Bob Stewart for the time and effort they have put into the program. As volunteers, Dakota and Bob visit local classrooms for one hour each week during the school year. They teach lessons that are prepared by Junior Achievement and use their personal experiences to make the curricula practical and realistic. The lessons of Junior Achievement focus on preparing students for life after school and help them to understand the business world.

Dakota and Bob's visits also provide the children with positive adult role models, who illustrate ways to build self-confidence, develop skills and find avenues of success in our free enterprise system. In return, both Dakota and Bob have found it to be mutually rewarding. "It's great to go into the classroom each week and see how excited the children get, because they've been waiting for you," Dakota says. "I encourage others to volunteer as well. There's always a need for adult mentors in the schools."

Ciba Employees help 4th and 5th Graders Explore the Colors of Light



Matt Watson took charge of a 5th grade class at Richardson Park Elementary School.

Science came to life at Richardson Park and Richey Elementary Schools when volunteers from Ciba Specialty Chemicals' Newport site helped them celebrate National Chemistry Week October 20 - 25. As a long-standing component of Ciba's science education and community outreach efforts, the volunteers Alison Gilefski, Maryann McLaughlin, John Verdi and Matt Watson helped the students explore

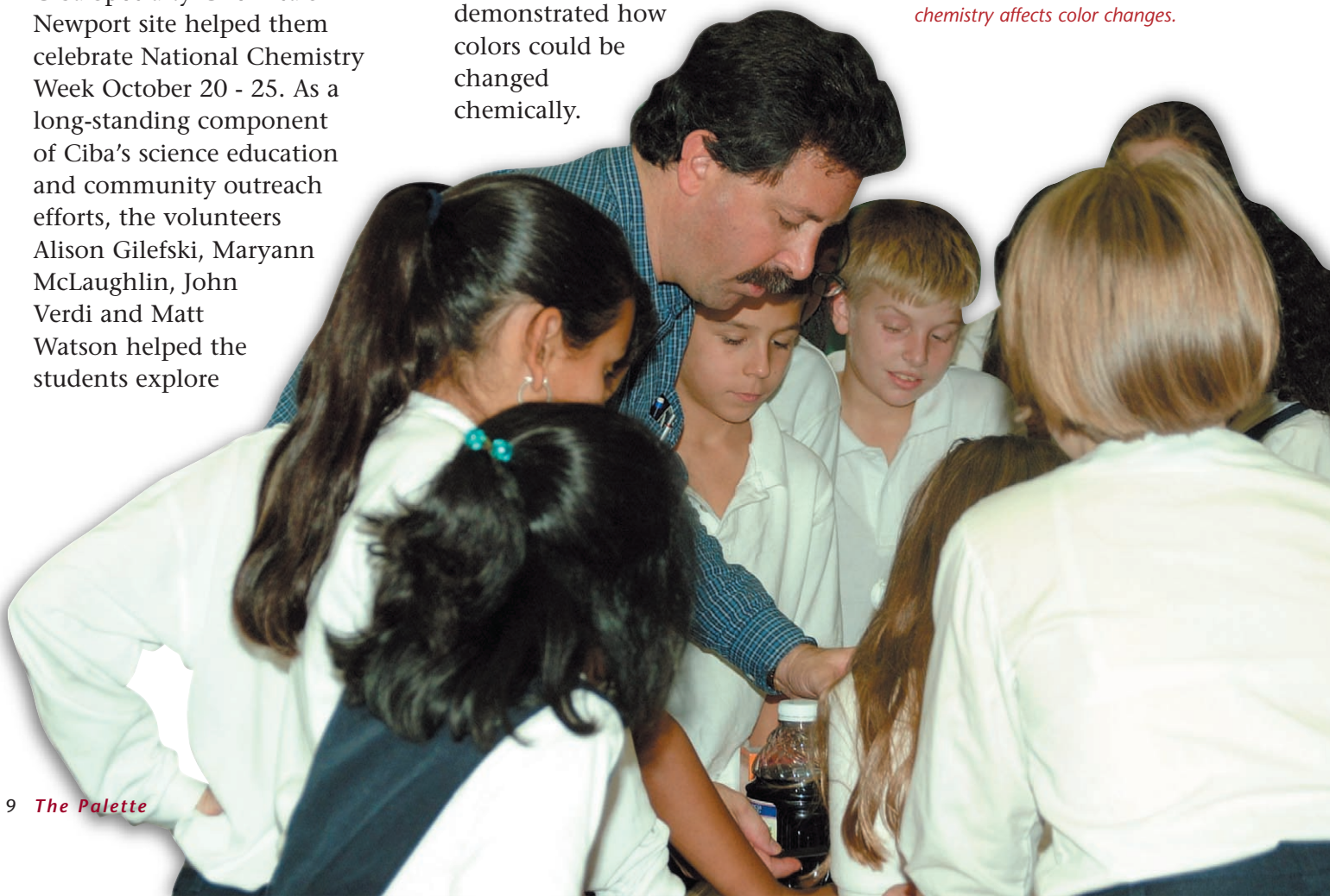
the important roles that science and chemistry play in our daily lives. Since the Newport site manufactures color pigments, it was only natural to develop a lesson around color.

Using a rainbow light, the students examined the colors of the light spectrum: Red, Orange, Yellow, Green, Blue, Indigo and Violet. They learned to remember the seven colors through the acronym ROY G. BIV — a name they'll never forget. Next, they observed how color filters block some of the rainbow colors and let only certain ones through. Then, a simple experiment using grape juice, vinegar and baking soda, demonstrated how colors could be changed chemically.

Finally, each student received a pair of light diffraction glasses so they could explore the rainbow colors from any light source. They were happy to keep the glasses and continue the experiment at home.

The Ciba volunteers enjoyed the program as much as the students. "They asked some really tough questions," Maryann noted, "like why doesn't a rainbow have an end. We'll have to do some homework before we teach this lesson again."

With a simple experiment involving grape juice, vinegar and baking soda, John Verdi demonstrated how chemistry affects color changes.



Making Spirits Bright



Ciba Newport employees shared some holiday spirit with local families in need. Through the Adopt-a-Family program, generous contributions totaling more than \$1,200 brought smiles to children, their parents and grand parents whose holiday may otherwise not have been so merry. Some gifts included sweaters and dolls for the girls, remote control cars and matchbox cars for the boys, wallets for a Dad and a Grand pop (with some spending cash), an art set and small backpack for a teenage girl, candles and wallets (with cash) for the moms and grand mom. In addition, each family received Shop Rite Gift Certificates (\$100 each) for their holiday meal and Payless Gift Certificates to provide new shoes for the children.

The Gifts were wrapped on December 22 and delivered to each family by Ciba Employees on December 23. One happy mom said, "Everything is perfect, just like I picked out the presents myself!" Ciba's Santas included Jeanne Butler, Alison Gilefski, Maria Hassel, Moira MacDonald, Eileen McManus, Maryann Mclaughlin, Marietta Smith and Susan White.

"The Adopt-a-Family program didn't just bring smiles and happiness to the families who received the gifts, it also helped to lift our spirits and realize the true meaning of giving," said Maryann Mclaughlin, the program coordinator. "Thank you to all who contributed to this heart-warming project."

Maryann Mclaughlin

Ciba Sponsored Science Students Tour Newport's Chemistry Labs

It was a red and white day on July 22 as high school students, clad in safety helmets and lab coats, visited the Ciba Newport site to explore the application of chemistry in industry. These students participated in the nationally recognized Ciba High School Chemistry Institute, an intensive two-week summer science program for high-achieving students entering their senior year.

The program was hosted at Ciba's U.S. Headquarters in Tarrytown, NY, where students learned from a faculty that included high school teachers, college professors, and Ciba professionals. Some instruction took place in Ciba's highly advanced industrial laboratories where, through a combination of hands-on chemistry and advanced instruction, the students explored the science behind organic synthesis, polymerization and chromatography. They also learned about the business of chemistry and had an opportunity to design their own company/product.



Twenty high-school honor students toured the labs at Newport.

The field trip to the Newport site complemented the learning process by allowing students to examine how lab-based research relates to development and production.

Now in its 14th year, the Ciba High School Chemistry Institute is funded primarily through the Ciba Specialty Chemicals Foundation, which forges partnerships among

schools, businesses and communities. Ciba sites across the country sponsor students from their communities. This year's participants were drawn from McIntosh, Ala.; Charlotte and High Point, N.C.; Suffolk, Va.; Newport, Del., and Westchester and Putnam Counties, N.Y.

The Newport Site sponsored two honor students from Glasgow High School, Lauren Diefenderfer and Jennifer Griffith. Both agreed that the intensive program offered by the Institute surpassed their expectations and helped to reinforce their desire to pursue chemistry as a career option.

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Ciba Specialty Chemicals Worldwide

We do business in more than 120 countries and have sales representatives and technical expertise available for our customers around the world.

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